

What is claimed is:

1. A volume holographic digital data storage system comprising:

5 a light source for generating a laser beam;

a beam splitter for separating the laser beam into a signal beam and a reference beam;

10 a spatial light modulator for modulating the signal beam into binary pixel data on a page-by-page basis based on data inputted from outside;

a beam selecting means for transmitting a selected portion of the reference beam to thereby provide a reduced reference beam;

15 a lens for deflecting the reduced reference beam into a storage medium; and

a reflecting means for reflecting the reduced reference beam received from the beam selecting means toward an incident location on the lens.

20 2. The system of claim 1, wherein the beam selecting means includes:

25 an iris having a transmission region for transmitting only the selected portion of the reference beam, thereby providing the reduced reference beam and a non-transmission region for absorbing or reflecting the remainder portion of the reference beam; and

a first actuator for changing the position of the transmission region of the iris to change the incident location.

5     3.     The system of claim 2, wherein the reflecting means includes:

        a first reflection mirror for reflecting the reduced reference beam received from the iris; and

        a second reflection mirror for reflecting the reduced  
10     reference beam received from the first reflection mirror toward the lens.

4.     The system of claim 3, further comprising a second actuator for altering a position of the second reflection  
15     mirror.

5.     The system of claim 4, wherein the first actuator moves the iris on a two-dimensional plane, to which the proceeding direction of the reduced reference beam toward  
20     the first reflection mirror is perpendicular, and the second actuator moves the second reflection mirror with an incident angle of the reduced reference beam toward the second reflection mirror being unchanged.

25     6.     The system of claim 3, further comprising a second actuator for altering a position of the first reflection

mirror.